

PVC (Polyvinyl Chloride) Drainage Board

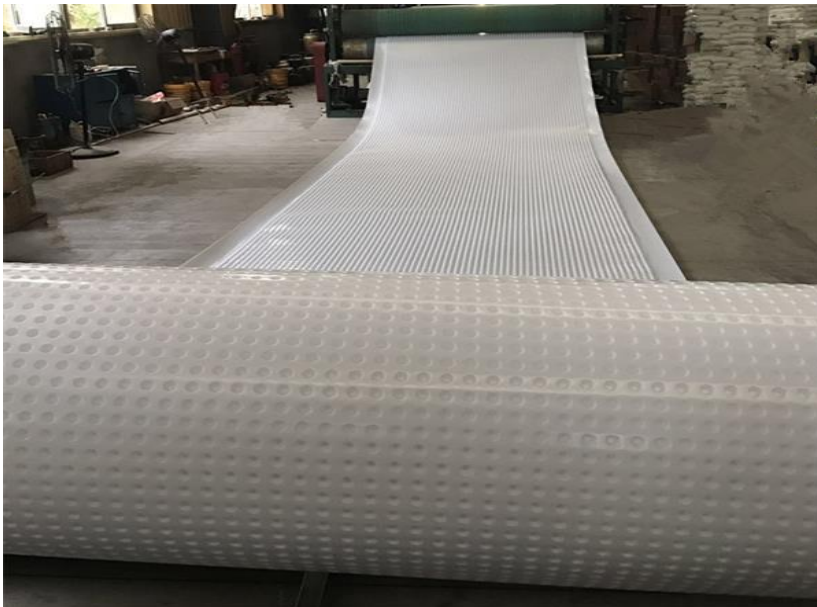


PVC drainage boards are made of PVC high-density polymer materials, which have good toughness. When buried in the soil, they can play a role in pulling the soil. The compressive strength and overall flatness of PVC drainage boards are greatly improved, with a width of 1-3M and a length of 4-10 meters or more. Plastic drainage boards provide valuable choices in urban land and space.

PVC drainage board is the use of high density polyvinyl chloride material extrusion molding, it makes full use of PVC material density, strength, amorphous structure and other material characteristics made of cross drainage board. PVC drainage board is a multi-functional material, can be easily used for water and gas, with sound insulation and vibration isolation function, can be widely used in building roof system layer overhead, planting roof drainage ventilation, basement waterproof, road and track tunnel drainage protection.



[PVC (Polyvinyl Chloride) Drainage Board]



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A good drainage system plays an important role in the construction cycle of civil engineering and the normal use and lifespan of structures. The drainage board and porous permeable pipe form an effective drainage system, and the cylindrical porous drainage board and geotextile also form a drainage system, forming a system with water seepage, storage, and drainage functions.

PVC (Polyvinyl Chloride) Drainage Board Features:

- After the PVC drainage board is laid, a new waterproof layer is formed due to the adhesive type hot bonding form, which has the drainage function and the secondary waterproof function;
- Due to the high density of PVC drainage board, it has a strong root separation, and the thickness of the film can be adjusted according to the requirements of the root separation to achieve the root separation effect;
- Because the PVC material is an amorphous structure, the use of special glue can effectively destroy the surface structure of the material so that the two layers can effectively dissolve together and play a waterproof root separation function. PVC drainage board can be used in the form of mechanical stamping;
- The compressive strength of PVC drainage plate is large, and its compressive strength is 1.5 times that of HIPS material of the same thickness and 2.5 times that of HDPE material.

Drainage Products: PVC (POLYVINYL CHLORIDE) DRAINAGE BOARD

APPLICATION

Greening project: garage roof greening, Roof garden, vertical greening, sloping roof greening, football field, golf course.

Municipal Engineering: airport, road subgrade, subway, tunnel, landfill.

Construction Engineering: the upper or lower floor of the building foundation, the wall of the underground indoor and outside, the seepage prevention and insulation layer of the roof, etc.

Traffic engineering: highway, railway subgrade, embankment and slope protection layer.

Water conservancy project: reservoir seepage prevention, reservoir, artificial lake to prevent water seepage.

SPECIFICATIONS OF PVC (POLYVINYL CHLORIDE) DRAINAGE BOARD

PERFORMANCE PARAMETERS FOR PVC DRAINAGE BOARD JC/T2112-2012

No	Item		Index
1	Tensile force at 10% elongation /(N/100mm)>		350
2	Maximum tensile force /(N/100mm)>		600
3	elongation at break /%>		25
4	Tear resistance /N>		100
5	Compression performance	Maximum strength at a compression rate of 20% /kpa >	150
		Extreme compression phenomenon	No rupture
6	Low temperature flexibility		-10°C No rupture
7	Thermal ageing (80.168h)	Tensile retention rate at 10% elongation /%>	80
		Maximum tensile retention rate /% >	90
		Breaking elongation retention rate /% >	70
		Maximum strength retention rate at a compression rate of 20% /%>	90
		Extreme compression phenomenon	No rupture
		Low temperature flexibility	-10°C No rupture
8	Vertical permeability (Pressure measurement 150kpa) /(cm/s)>		10

PVC drainage boards are formed by extrusion adsorption and other processes to form enclosed protruding cylindrical or semi conical shells, forming a continuous membrane and shell with three-dimensional space and certain support stiffness, in which liquids and gases can flow and be discharged. It is a functional material with many potential functions, and it is easy to construct an overhead layer during use, forming drainage and exhaust channels to achieve sound insulation and vibration isolation functions. In the field of civil and construction engineering, it can be widely used for the drainage and ventilation of overhead and planted roofs in building roof systems, drainage protection of basement waterproofing systems, moisture-proof and thermal insulation protection of indoor floors, and drainage protection of highways, railways, and tunnels. Plastic drainage boards provide valuable choices in urban land and space.

PVC drainage boards can quickly and effectively drain rainwater, greatly reducing or even eliminating the static water pressure of the waterproof layer. Through this active water guiding principle, the effect of active waterproofing can be achieved.

Polyethylene (HDPE) polystyrene (PVC) drainage board material itself is a good waterproof material. By adopting reliable connection methods, the waterproof drainage board becomes a good auxiliary waterproof material.

Laboratory data shows that polyethylene (HDPE) and polyvinyl chloride (PVC) drainage boards can effectively reduce indoor noise levels of 14 decibels and 500Hz, and have significant noise reduction and sound insulation functions.



Drainage Products: PVC (POLYVINYL CHLORIDE) DRAINAGE BOARD

PROJECTS CASE OF PVC (POLYVINYL CHLORIDE) DRAINAGE BOARD



[Roadbed Drainage in Tanzania]



[Square Greening in Swaziland]

CONSTRUCTION PRECAUTIONS

Installation of HIPS drainage board is an important step in ensuring effective waterproofing and soil retention. Follow these steps for proper installation:

- Prepare the surface: Clean the surface where the drainage board will be installed to ensure it is smooth, clean, and free of protrusions or sharp objects that may damage the board.
- Unroll the board: Roll out the drainage board onto the prepared surface, making sure it is aligned and centered correctly.
- Cut and trim: Use a sharp knife or scissors to cut the board to the required size and shape, taking care to make precise cuts and avoid any damage to the board.
- Overlap the boards: For larger areas, overlap multiple boards by at least 100 mm and use a hot air gun to weld the seams together.
- Fix the board: Fix the board to the surface using mechanical fixings or adhesive, following the manufacturer's instructions.
- Install the waterproofing membrane: Once the drainage board is installed, install the waterproofing membrane on top of it using the appropriate adhesive or mechanical fixings.
- Test the system: Test the system thoroughly to ensure it functions correctly and provides the required level of protection.

PRECAUTIONS FOR DRAINAGE BOARD CONSTRUCTION:

- In vertical applications, fix the drainage board to the wall with profiles in the subbasement level. Ensure the direction of the dimples is towards the outer side of the wall. Overlap the joints between the plates by at least 20 cm. Fix the overlap parts of the plates to each other by hot air hand welding or glued insulated tape if desired.
- In horizontal applications, lay the drainage board on the ground. Ensure the direction of the dimples is towards the ground. Overlap the joints between the plates by at least 30 cm. Fix the overlap parts of the plates to each other by hot air hand welding or glued insulated tape if desired.
- The ideal application temperature range for drainage board is between +5 to +30 degrees celsius.



When used on the ground or wall, drainage boards can also play a good role in ventilation and moisture prevention.